

AMENDMENTS TO THE CLAIMS:

The following listing of claims replaces all prior versions of the claims.

LISTING OF CLAIMS:

1-34. (canceled)

35. (currently amended) An *in vitro* diagnostic method for detecting the presence or absence of nucleic acid of a Human Immunodeficiency Virus Type 1 (HIV-1) in a biological sample comprising:

(a) providing a cell-free supernatant of a biological fluid comprising cells infected with HIV-1, and

(~~a~~) (b) contacting said ~~biological sample~~ supernatant with one or more nucleic acid probes comprising

(i) a nucleic acid of ORF-1 of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MEQAPEDQGPQREPHNEWTLLEELKNEAVRHFPRIWLHGLGQHIYETYGDT
WAGVEAIIRILQQLLFHFIRIGCRHSRIGVTQRRARNGASRS,

(ii) a nucleic acid of ORF-4 of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MQPIQIAIALVVAIIIVVWSIVIEYRKILRQRKIDRLIDRLIERAEDSGNESEGEIS
ALVEMGVEMGHHAPWDIDDL, and

(iii) a nucleic acid of ORF-R of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MGGKWSKSSVVGWPTVRERMRRAEPAADGVGAASRDLEKHGAITSSNTAAT
NAACAWLEAQEEEEVGFPVTPQVPLRPMTYKAAVDLSHFLKEKGGLEGLIHSQRRQDI

LDLWIYHTQGYFPDWQNYTPGPGVRYPLTFGWICYKLVPVEPDKVEEANKGENTSLLH
PVSLHGMDDPEREVLEWRFD SRLAFHHVARELHPEYFKNC; and

(b) (c) detecting the formation of hybrids between said one or more nucleic acid probes and HIV-1 nucleic acid present in said ~~biological sample~~ supernatant.

36. (previously presented) The method according to claim 35, wherein said probe is labeled with a label selected from the group consisting of a radioactive label, an enzymatic label, and a fluorescent label.

37. (currently amended) An *in vitro* diagnostic method for detecting the presence or absence of nucleic acid of a Human Immunodeficiency Virus Type 1 (HIV-1) in a biological sample comprising:

(a) providing a cell-free supernatant of a biological fluid comprising cells infected with HIV-1, and

(a) (b) contacting said ~~biological sample~~ supernatant with one or more nucleic acid probes comprising

(i) a nucleic acid of ORF-1 of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MEQAPEDQGPQREPHNEWTLLEELKNEAVRHFPRIWLHGLGQHIYETYGDT
WAGVEAIRILQQLLFIFRIGCRHSRIGVTQQRRARNGASRS and

(ii) a nucleic acid of ORF-4 of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MQPIQIAIALVVAIIIAIVVWSIVIEYRKILRQRKIDRLIDRLIERAEDSGNESEGEIS
ALVEMGVEMGHHAPWDIDDL; and

~~(b)~~ (c) detecting the formation of hybrids between said one or more nucleic acid probes and HIV-1 nucleic acid present in said ~~biological sample~~ supernatant.

38. (previously presented) The method according to claim 37, wherein said probe is labeled with a label selected from the group consisting of a radioactive label, an enzymatic label, and a fluorescent label.

39. (currently amended) An *in vitro* diagnostic method for detecting the presence ~~or absence~~ of nucleic acid of a Human Immunodeficiency Virus Type 1 (HIV-1) in a biological sample comprising:

(a) providing a cell-free supernatant of a biological fluid comprising cells infected with HIV-1, and

~~(a)~~ (b) contacting said ~~biological sample~~ supernatant with one or more nucleic acid probes comprising

(i) a nucleic acid of ORF-4 of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MQPIQIAIALVVAIIIAIVVWSIVIEYRKILRQRKIDRLIDRLIERAEDSGNESEGEIS
ALVEMGVEMGHHAPWDIDDL and

(ii) a nucleic acid of ORF-R of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MGGKWSKSSVVGWPTVRERMRRAPAADGVGAASRDLEKHGAITSSNTAAT
NAACAWLEAQEEEEVGFPVTPQVPLRPMTYKAAVDLSHFLKEKGGLEGLIHSQRRQDI
LDLWIYHTQGYFPDWQNYTPGPGVRYPLTFGWCYKLVPVEPDKVEEANKGENTSLLH
PVSLHGMDDPEREVLEWRFD SRLAFHHVARELHPEYFKNC; and

(b) (c) detecting the formation of hybrids between said one or more nucleic acid probes and HIV-1 nucleic acid present in said ~~biological sample~~ supernatant.

40. (previously presented) The method according to claim 39, wherein said probe is labeled with a label selected from the group consisting of a radioactive label, an enzymatic label, and a fluorescent label.

41. (previously presented) An *in vitro* diagnostic kit for detecting the presence or absence of nucleic acid of a Human Immunodeficiency Virus Type 1 (HIV-1) in a biological sample comprising:

(a) a composition comprising one or more nucleic acid probes comprising

(i) a nucleic acid of ORF-1 of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MEQAPEDQGPQREPHNEWTLELLEELKNEAVRHFPRIWLHGLGQHIYETYGDT
WAGVEAIIRILQQLLFIFRIGCRHSRIGVTQQRARRNGASRS,

(ii) a nucleic acid of ORF-4 of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MQPIQIAIAALVVAIIIAIVVWSIVIEYRKILRQRKIDRLIDRLIERAEDSGNESEGEIS
ALVEMGVEMGHHAPWDIDDL, and

(iii) a nucleic acid of ORF-R of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MGGKWSKSSVVGWPTVRERMRRAPADGVGAASRDLEKHGAITSSNTAAT
NAACAWLEAQEEEEVGFPVTPQVPLRPMTYKAAVDLSHFLKEKGGLEGLIHSQRRQDI
LDLWIYHTQGYFPDWQNYTPGPGVRYPLTFGWCYKLPVEPDKVEEANKGENTSLLH
PVSLHGMDDPEREVLEWRFD SRLAFHHVARELHPEYFKNC;

- (b) reagents for detecting the hybrids; and
- (c) a biological reference sample lacking nucleic acid recognized by said nucleic acid probe composition.

42. (previously presented) The kit according to claim 41, wherein said probe is labeled with a label selected from the group consisting of a radioactive label, an enzymatic label, and a fluorescent label.

43. (previously presented) An *in vitro* diagnostic kit for detecting the presence or absence of nucleic acid of a Human Immunodeficiency Virus Type 1 (HIV-1) in a biological sample comprising:

- (a) a composition comprising one or more nucleic acid probes comprising
 - (i) a nucleic acid of ORF-1 of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MEQAPEDQGPQREPHNEWTLELLEELKNEAVRHFPRIWLHGLGQHIYETYGDT
WAGVEAIIRILQQLLFIFRIGCRHSRIGVTQQRRARNGASRS and

- (ii) a nucleic acid of ORF-4 of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MQPIQIAIAALVVAIIVVWSIVIEYRKILRQRKIDRLIDRLIERAEDSGNESEGEIS
ALVEMGVEMGHHAPWDIDDL;

- (b) reagents for detecting the hybrids; and
- (c) a biological reference sample lacking nucleic acid recognized by said nucleic acid probe composition.

44. (previously presented) The kit according to claim 43, wherein said probe is labeled with a label selected from the group consisting of a radioactive label, an enzymatic label, and a fluorescent label.

45. (previously presented) An *in vitro* diagnostic kit for detecting the presence or absence of nucleic acid of a Human Immunodeficiency Virus Type 1 (HIV-1) in a biological sample comprising:

(a) a composition comprising one or more nucleic acid probes comprising

(i) a nucleic acid of ORF-4 of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MQPIQIAIAALVVAIIIAIVVWSIVIEYRKILRQRKIDRLIDRLIERAEDSGNESEGEIS
ALVEMGVEMGHHAPWDIDDL and

(ii) a nucleic acid of ORF-R of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MGGKWSKSSVVGWPTVRERMRAEPAADGVGAASRDLEKHGAITSSNTAAT
NAACAWLEAQEEEEVGFPVTPQVPLRPMTYKAAVDLSHFLKEKGGLEGLIHSQRRQDI
LDLWIYHTQGYFPDWQNYTPGPGVRYPLTFGWCYKLVPVEPDKVEEANKGENTSLLH
PVSLHGMDDPEREVLEWRFD SRLAFHHVARELHPEYFKNC;

(b) reagents for detecting the hybrids; and

(c) a biological reference sample lacking nucleic acid recognized by said nucleic acid probe composition.

46. (previously presented) The kit according to claim 45, wherein said probe is labeled with a label selected from the group consisting of a radioactive label, an enzymatic label, and a fluorescent label.

47. (new) An *in vitro* diagnostic method for detecting the presence of nucleic acid of a Human Immunodeficiency Virus Type 1 (HIV-1) in a biological sample comprising:

- (a) providing a cell-free supernatant of a biological fluid comprising cells infected with HIV-1, and
- (b) detecting HIV-1 nucleic acid present in said supernatant.

48. (new) The *in vitro* diagnostic method of claim 47, wherein the presence of nucleic acid of a Human Immunodeficiency Virus Type 1 (HIV-1) is detected by

- (a) contacting said supernatant with one or more nucleic acid probes comprising:

- (i) a nucleic acid of ORF-1 of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MEQAPEDQGPQREPHNEWTLELLEELKNEAVRHFPRIWLHGLGQHIYETYGDT
WAGVEAIIRILQQLLFHFRIGCRHSRIGVTQQRRARNGASRS,

- (ii) a nucleic acid of ORF-4 of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MQPIQIAIAALVVAIIIAIVVWSIVIEYRKILRQRKIDRLIDRLIERAEDSGNESEGEIS
ALVEMGVEMGHHAPWDIDDL, and

- (iii) a nucleic acid of ORF-R of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MGGKWSKSSVVGWPTVRERMRRAPADGVGAASRDLEKHGAITSSNTAAT
NAACAWLEAQEEEEVGFPVTPQVPLRPMTYKAAVDLSHFLKEKGGLEGLIHSQRRQDI

LDLWIYHTQGYFPDWQNYTPGPGVRYPLTFGWICYKLVPVEPDKVEEANKGENTSLLH
PVSLHGMDDPEREVLEWRFD SRLAFHHVARELHPEYFKNC; and

(b) detecting the formation of hybrids between said one or more nucleic acid probes and HIV-1 nucleic acid present in said supernatant.

49. (new) The *in vitro* diagnostic method of claim 47, wherein the presence of nucleic acid of a Human Immunodeficiency Virus Type 1 (HIV-1) is detected by

(a) contacting said supernatant with one or more nucleic acid probes comprising:

(i) a nucleic acid of ORF-1 of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MEQAPEDQGPQREPHNEWTLELLEELKNEAVRHFPRIWLHGLGQHIYETYGDT
WAGVEAIIIRILQQLLFIFRIGCRHSRIGVTQRRARNGASRS and

(ii) a nucleic acid of ORF-4 of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MQPIQIAIALVVAIIIVWSIVIEYRKILRQRKIDRLIDRLIERAEDSGNESEGEIS
ALVEMGVEMGHHAPWDIDDL; and

(b) detecting the formation of hybrids between said one or more nucleic acid probes and HIV-1 nucleic acid present in said supernatant.

50. (new) The *in vitro* diagnostic method of claim 47, wherein the presence of nucleic acid of a Human Immunodeficiency Virus Type 1 (HIV-1) is detected by

(a) contacting said supernatant with one or more nucleic acid probes comprising:

(i) a nucleic acid of ORF-4 of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MQPIQIAIAALVVAIIIAIVVWSIVII EYRKILRQRKIDRLIDRLIERAEDSGNESEGEIS
ALVEMGVEMGHHAPWDIDDL and

(ii) a nucleic acid of ORF-R of Human Immunodeficiency Virus Type 1 (HIV-1) encoding the amino acid sequence:

MGGKWSKSSVVGWPTVRERMRRRAEPAADGVGAASRDLEKHGAITSSNTAAT
NAACAWLEAQEEEEVGFPVTPQVPLRPMTYKAAVDLSHFLKEKGGLEGLIHSQRRQDI
LDLWIYHTQGYFPDWQNYTPGPGVRYPLTFGWCYKLVPVEPDKVEEANKGENTSLLH
PVSLHGMDDPEREVLEWRFD SRLAFHHVARELHPEYFKNC; and

(b) detecting the formation of hybrids between said one or more nucleic acid probes and HIV-1 nucleic acid present in said supernatant.